



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/033,205

12/28/2001

Hyun Jin Kim

EKM-84257

8258

30764

7590

04/02/2004

SHEPPARD, MULLIN, RICHTER & HAMPTON LLP  
333 SOUTH HOPE STREET  
48TH FLOOR  
LOS ANGELES, CA 90071-1448

EXAMINER

BUTTNER, DAVID J

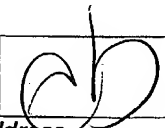
ART UNIT

PAPER NUMBER

1712

DATE MAILED: 04/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	10/033,205	KIM, HYUN JIN	
	Examiner	Art Unit	
	David Buttner	1712	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 28 January 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,4-10,13-21 and 23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,4-10,13-21,23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

Art Unit: 1712

Claims 1, 4-10, 13-21 and 23 rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claims 1, 18 and 23 require the "end group" of (c) (ii) to be certain structures. There is no basis in the specification to require "end group" to be anything".

Claims 1, 4-10 and 13-23 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

How does one ensure the functional groups of (c) (ii) will be located at the "end group". Normal random polymerization will locate these functional groups along the length of the polymer chain.

Claims 1, 4, 6-8, 13-21 and 23 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over the Sano '862 Patent.

Sano exemplifies (Table 2) compositions for intermediate layers of golf balls. The composition contains ionomer (applicant's base), HG-252 (applicant's hydroxylated block polymer) and epoxidized block polymer.

The epoxidized block polymer qualifies as a functionalized polymer having a glycidyl group, because the epoxidation of the 1,2, addition diene units will result in glycidyl units.

Claims 1,4-8,13-21 and 23 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over the Yabuki '065 Patent.

Yabuki exemplifies (# 7) blends of ionomer, HG252, Himilan 1855 and epoxidized block polymer. The ionomer qualifies as applicant's base polymer (b). The epoxidized block polymer qualifies as applicant's base polymer (b) or glycidyl functionalized polymer (c). The Himilan 1855 qualifies as applicant's carboxylic functional polymer (c) as it is only partially neutralized. (see Takesue '437 description col. 2 line 39,62).

Claims 1,4,6-8, 13-21 and 23 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over the Kato '291 Patent.

Kato suggests golf ball covers of ionomer, hydroxyl terminated elastomer and epoxy modified elastomer (col. 3, lines 36-40)

The hydroxyl terminated elastomer can be HG 252 (table 3). The epoxy polymer can be an ethylene/glycidylacrylate polymer (col. 4, line 3-22).

Claims 1,5-10 and 13-21 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over the Ohkawachi '014 Patent.

Ohkawachi exemplifies (#6) blends of PPE (applicant's base), HG - 252 (applicant's triblock) and ABS (applicant's impact modifier). Applicant's "golf ball

Art Unit: 1712

component" is considered to be nothing more than a future intended use for the composition for the reasons explained in previous actions.

Also note MBS or maleic anhydride/styrene copolymer can be used in place of ABS (col. 9, lines 50).

Claims 1,4, 6-8,13-21 and 23 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over the J2000026677 Patent.

The reference is believed to exemplify (#5-7) blends of ionomer, hydroxyl terminated styrene-diene-styrene block polymer and a third block polymer. This third block polymer is believed to contain acrylic acid units (paragraph 40,42,44). These qualify as applicant's carboxylic functional polymers ( c).

The composition is useful in golf balls (paragraph 30).

Applicant's arguments filed 1/28/04 have been fully considered but they are not persuasive.

Applicant's argument that "end group" has a recognized meaning in the art does not address the lack of support (new matter) problems. Where in the original disclosure are the "end groups" of (c) discussed?

Applicant argues Sano and Yabuki's epoxidized block polymers do not qualify as glycidyl functionalized polymers.

Glycidyl groups are a type of epoxy group.

Applicant argues Ohkawachi lacks the impact modifiers of the current claims.

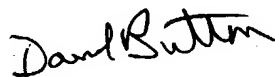
This is not convincing. The ABS of Ohkawachi's example 6 is one of applicant's claimed impact modifiers. The PPE qualifies as applicant's base (page 10, line 16 of spec).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Buttner whose telephone number is (571) 272-1084. The examiner can normally be reached on Weekdays from 10:00 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (571) 272-1119. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-1700.

DAVID J. BUTTNER  
PRIMARY EXAMINER



D. Buttner/af  
March 31, 2004